Honors Thesis

Kathryn Bolick

Abstract

The art market operates under substantial price uncertainty and information asymmetry. This thesis examines how pre-auction estimates shape bidder behavior and hammer price outcomes, and whether observable characteristics explain variation in estimate uncertainty, sale success, and hammer price realization. Using over 100,000 auction lots of fine art from major auction houses, I utilize regression analysis to evaluate the informational relevance of pre-auction estimates. I find strong evidence of anchoring: as estimate uncertainty increases, hammer prices converge within the estimate range and shift toward the low estimate. Higher uncertainty substantially reduces hammer price placement in relation to the estimate range. Other observable characteristics exhibit varying explanatory power for estimate uncertainty, successful sale propensity, and hammer price outcomes. Correcting for potential sample selection bias strengthens the anchoring effect and weakens prior sale informational effects. Overall, the findings highlight the key role of auction house estimates in bidder price anchoring.

Beyond the Brushstroke: Examining the Power of Pricing and Provenance in the Fine Art Market

Advisor

Greg Brown Ph.D.

Van and Kay Weatherspoon Distinguished Professor of Finance
UNC Kenan-Flagler Business School

Make Bias Visible: Algorithmic Hiring and the Role of Governance in Early-Stage Recruitment

Advisor

Sekou Bermiss Ph.D.

Associate Professor of Strategy and Entrepreneurship
UNC Kenan-Flagler Business School

Raven Heyward

Abstract

Artificial intelligence (AI) increasingly shapes early stage recruitment, often determining which candidates advance before human review. Although often framed as efficient and objective, these systems can reproduce or amplify labor-market inequalities by generating disparate impacts--outcome-based differences in selection rates across protected groups, regardless of intent (Barocas & Selbst, 2016). Using a comparative approach, it analyzes New York City's Local Law 144, which mandates bias audits for Automated Employment Decision Tools, and North Carolina's voluntary Responsible AI Framework. Drawing on policy analysis, regulatory guidance, and audit documentation, the study assesses the influence of mandatory versus voluntary governance models on transparency, accountability, and equity. Findings reveal significant gaps, showing that limited oversight can obscure algorithmic decision-making and weaken bias mitigation. By focusing on entry-level recruitment, this research highlights how governance frameworks shape access to economic opportunity and offers insights for more equitable AI hiring practices.

Honors Thesis

Lucia (Chaeyeon) Park

Abstract

In clinical and biological research, comparisons of treatment effects often involve rare events observed over unequal exposure times, making crude event counts misleading. This study focuses on exposure-adjusted incidence densities as a principled approach for comparing event rates while accounting for varying time at risk and stratification factors such as demographic or geographic characteristics. Under a Poisson framework, we present and connect several methods for estimating stratified incidence density ratios, including the Mantel–Haenszel test, Fieller's method, stratified conditional Poisson regression, and standard Poisson regression. Using melanoma and rotavirus datasets, we demonstrate how these methods perform under different data conditions, including varying sample sizes and event frequencies. Results show consistent inference across methods when assumptions are met, while highlighting differences in applicability depending on homogeneity across strata and sample size. In particular, Fieller's method and conditional Poisson regression provide valid inference in small-sample settings, whereas standard Poisson regression is more suitable for larger datasets. Overall, this work emphasizes the importance of adjusting for both exposure and stratification, and provides practical guidance on selecting appropriate statistical methods for estimating incidence density ratios in applied research settings.

Methods for Stratified Rations of Exposure-Adjusted Incidence Rates for Groups with Enumerated Adverse Events

Advisor

Gary G. Koch Ph.D.

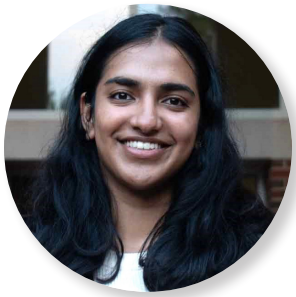
Professor of Biostatistics and Director of the Biometric Consulting Laboratory
University of North Carolina at Chapel Hill

Does Leaders' (Un) Ethicality Challenge or Threaten Employees: A Stress-Appraisal Explanation of Leaders' Influence on Employee Well-Being

Advisor

Marie Mitchell Ph.D.

Professor of Organizational Behavior and
Edward M. O'Herron Scholar
UNC Kenan-Flagler Business School



Adhithi Ramprakash

Abstract

Fueling (vs. depleting) employee well-being is challenging yet critical for organizations. Leaders' ethicality or unethicality is a key contributor to employees' well-being. While research has documented associations between ethical and unethical leadership and employee well-being, the psychological process through which leader behavior influences employees is not as well understood. The present study uses stress appraisal theory to examine how employees' interpretations of (un)ethical leader behaviors affect their stress and self-regulation, which subsequently affects their psychological, physical, and social well-being (through the indicators of work withdrawal, somatic complaints, and depressive symptoms). Using a recall experiment, results found that unethical leadership evoked threat appraisals, which evoked depleted self-regulation and, in turn, worsened well-being outcomes. Ethical leadership was positively associated with challenge appraisals, which were positively related to engagement. However, engagement did not significantly influence the well-being outcomes. Theoretical and practical implications are discussed.

Honors Thesis

Chi Vu

Abstract

Shrimp aquaculture expansion in Vietnam's Mekong Delta has driven significant mangrove loss, as traditional extensive farming involves clearing mangrove forests for pond construction, resulting in little to no mangrove coverage and reduced coastal protection and ecosystem services. Integrated mangrove-shrimp (IMS) farming, which requires 50-60% mangrove coverage within farm areas, has been promoted as a more sustainable and profitable alternative. However, adoption remains limited, with many farms operating below this required threshold. Using farm-level secondary data and qualitative interviews, this study estimates the short-term financial cost of transitioning to the required coverage rate and explores farmer perceptions of associated risks and barriers. Results indicate that transitioning to IMS costs farmers approximately 5.202 million VND (226.15 USD) per hectare, accounting for foregone profit and initial investment. These estimated costs correspond with farmer perceptions that financial and ecological risks make adoption unviable without external support.

Mangrove Conservation and Sustainable Shrimp Farming: Assessing the Cost of Change and Farmer Perspectives on Transitioning to Integrated Mangrove-Shrimp Systems in Vietnam

Advisor

Jeffrey Mittelstadt Ph.D.

Professor of the Practice of Strategy and Entrepreneurship,
ExecutiveDirector of the Ackerman Center for Excellence in Sustainability
UNC Kenan-Flagler Business School

The Colonial Roots of American Coercion: Extractive Institutions, Geopolitical Alignment, and Sanction Selection

Advisor

Navin Bapat Ph.D.

Professor in International Relations and Chair of the Department of Political Science
Univesity of North Carolina at Chapel Hill

Meilin Weathington

Abstract

This thesis examines how colonial legacies shape contemporary foreign policy alignment and vulnerability to U.S. economic sanctions. Using an original country-year dataset (1980–2005), it argues that extractive colonial institutions, characterized by resource concentration, weak sovereignty, and dependent economic structures, orient postcolonial states toward Russia (as measured by UN General Assembly voting), increasing their likelihood of U.S. sanctions targeting. Employing OLS and logit regression models with year fixed effects, and controlling for GDP per capita, regime type, and key economic indicators, the analysis finds that former extractive colonies align with Russia at significantly higher rates than never-colonized states, particularly during the Cold War. This alignment gap narrows after 1991. Findings on sanctions are more nuanced. While settler colonies show a positive association with U.S. targeting, the effect for extractive colonies is indirect, operating through alignment and largely limited to the Cold War period. Overall, the study highlights colonial institutional legacy as a critical but underexamined driver of foreign policy orientation and coercive statecraft.