# Matteo Burato

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#### **EDUCATION**

## Ph.D. in Strategy and Sustainability

September 2020 - June 2026 (Expected)

Imperial College London

- Dissertation: The emergence of sustainability strategies and their financial and non-financial consequences
- Advisors: Maurizio Zollo, Robert Kosowski
- Coursework: Distinction (obtained a Master of Research degree)

# Visiting Ph.D

January 2024 - December 2024

The Wharton School, University of Pennsylvania

- Projects: Leveraging AI and big data to map sustainability activities and stakeholder reactions
- Host: Witold Henisz

### Master of Science in Economics

September 2018 - September 2020

Bocconi University; UCLouvain; UNamur (joint degree)

- Thesis: A model of sustainability initiatives generation and allocation in a profit-maximizing firm environment
- Advisor: Benoît DecerfGrade: 110 cum laude/110

#### Bachelor of Science in Economics and Finance

September 2015 - September 2018

Bocconi University, Grade: 110/110, Advisor: Riccardo Zecchina (thesis on machine learning to investigate hedge funds' style and performance), Exchange: Victoria University of Wellington (GPA: A)

#### RESEARCH INTERESTS

Non-Market Strategy, Stakeholder Strategy, Corporate Sustainability, Machine Learning Inference, Bayesian and Formal Modeling, Cooperative Game Theory, Resource-Based View, International Business, Organizational Cognition and Systems Thinking

# Published Papers

• Burato, M., Tang, S., Vastola, V. & Cenci, S. (2023). Organizational System Thinking as a Cognitive Framework to Meet Climate Targets. Proceedings of the National Academy of Sciences 120, 41 available here

This paper focuses on the identification of system-thinking traits in organizations. In particular, I theorize that an emergent firm-level property, organizational system thinking (OST), is a significant antecedent in the effectiveness of emission reduction practices to fight climate change. The findings imply that the emission pathways of companies that embrace OST are significantly more likely to align with global emission reduction targets.

• Cenci, S., Burato, M., Rei, M., & Zollo, M. (2023). The alignment of companies' sustainability behavior and emissions with global climate targets. Nature Communications 14, 7831 available here

This paper describes the results of an extensive machine learning-based analysis of non-financial disclosure data to assess sustainability actions by companies and their effect on climate pathways. A key finding of the study is that companies that are at the forefront of the climate transition invest strongly in r&d and sustainable transition activities, while laggerds significantly over-invest in risk-mitigation. This article currently sits at 46 citation on Google Scholar.

• Cenci, S., Burato, M., Rei, M., & Zollo, M. (2025). Assessing the effectiveness of interdependent corporate sustainability choices. npj Clim. Action 4, 25. available here

This paper develops an integrated (environmental and financial) fitness landscape perspective to look at corporate sustainability choices. By using machine learning techniques (random forests for landscape estimation and genetic algorithms for problemistic search), we estimate the landscape and its ruggedness (epistasis) empirically. The results document a strong degree of interrelation between environmental and financial domains, and that strategic behavior in the former has consequences for the latter.

• Burato, M., Pellegrino, F., & Zollo, M. (2025). Search behavior with conflicting performance feedback across multiple goals. target journal: Management Science, nominated for Best Methods paper at SMS Conference 2025, presented (upcoming) at SMS Conference 2025, SEI Conference 2025

This paper re-examines the relationship between corporate sustainability behavior and stock returns. The analysis is based portfolios of stocks according to three firm-level signals with increasing level of strategic focus of sustainability activities (advocacy, preparation, and transformation) based on the retrieval, via AI / transformer models, of 1.3 million initiatives from 75,000 sustainability reports. The findings show that only companies with higher transformation are linked to higher future ROA and enjoy significant positive alpha. Furthermore, we document a clear market learning curve that suggest markets are becoming more efficient in pricing sustainability.

• Burato, M., & Henisz, W. (2025). Corporate purpose as a redistribution policy announcement in the stakeholder firm. target journal: Academy of Management Review

This paper develops a novel formalization of the theory of the firm that includes key insights from stakeholder governance, including collective action problems such as shirking and infighting, as well as externalities of the production process. The theoretical model is rooted in cooperative game theory and grants management key levers to ensure the well functioning of the stakeholder coalition and ensuring long-term value generation. In particular, we simulate different redistribution policy announcements (a promised *corporate purpose*) and their effect cascade on stakeholder behavior and firm performance both formally and via simulations.

• Burato, M., & Henisz, W. (2025). Capitalizing Sustainability Investments. target journal: Strategic Management Journal

This paper links the existing open question of the documented increase in intangible capital that has been a key feature of market evaluation in the last decade with the role of sustainability and CSR activities by corporations. The analysis relies on the measurement of latent intangible capital accumulation and depreciation from multiple sources, including sustainability investments, using structural equation modeling. Our preliminary findings suggest that there is significant heterogeneity in firm efficiency in utilizing intangible capital from sustainability, but once that link is established the link to both financial and non-financial performance is strong.

• Burato, M., Staessens, M., & Vastola, V. (2025). Search behavior with conflicting performance feedback across multiple goals. target journal: Organization Science

This paper examines corporate problemistic search behavior when faced by performance aspirations on two different goals, a financial and an environmental one. The measurement of environmental search behavior intensity is based on changes in the portfolio of environmental sustainability initiatives year-on-year, while both historical and peer performance converge in forming aspiration level both on environmental (GHG emissions) and financial (net income) terms.

• Burato, M., & Vastola, V. (2024). Doing Well by Acting Good: Uncovering mediation among financial and nonfinancial performances. target journal: Strategic Management Journal, presented at SMS Conference 2024

This paper addresses the business case for Corporate Social Responsibility (CSR) by investigating if the "substantiveness" of a firm's environmental actions impacts its financial performance. The analysis of a large dataset of sustainability initiatives reveals that substantive actions are associated with reduced GHG emissions and, subsequently through bootstrapped mediation analysis, improved operating performance.

• Burato, M., Vastola, V., Tang, S., & Cenci, S. (2024). Organizational System Thinking as a Strategic Tool to Manage Crises. target journal: Management Science

This paper is a direct follow-up on the already published *PNAS* that established organizational system thinking (OST) as a construct. The core argument is that firms with a higher capacity for system thinking develop a more diversified portfolio of sustainability actions. This diversity is theorized to enhance a firm's stability during a crisis by mitigating risks and also supports superior adaptation and performance recovery after the shock. The analysis is centered around a DiD design with OST as continuous treatment for energy companies pre and post the 2014 oil crisis.

• Burato, M., & Kosowski, R. (2023). Disclosing sustainability information: an event study perspective. target journal: Journal of Financial Economics

This paper builds on the literature stream in finance and accounting that guages short-term market reactions to new information made available by corporation. In particular, it is fairly known that financial reactions to non-financials disclosures are generally weak, but little evidence has been brought forward regarding the differential reaction to different contents that are being disclosed. The analysis consists in the construction of an event study around sustainability report disclosure dates to examine cumulative abnormal returns associated with different sustainability strategies. Results show that markets do react to environmental substantive actions, while falling flat on social issues and symbolic activities.

- 2025 Strategic Management Society annual conference: paper best methods paper nomination
- 2025 Strategy, Entrepreneurship, and Innovation (SEI) doctoral consortium and faculty workshop: paper
- 2025 Conference on Competitiveness and Cooperation (CCC) conference: paper
- 2025 Academy of Management annual conference: paper symposium
- 2024 Strategic Management Society annual conference: paper doctoral consortium
- 2024 Strategy Science annual conference: doctoral consortium
- 2024 Corporate Purpose conference & Academy of Management annual conference: poster
- 2022 Alliance for Research on Corporate Sustainability (ARCS) annual conference: paper

## SERVICE

- Reviewer for Physica A: Statistical Mechanics and its Applications
- Reviewer for Nature Humanities and Social Sciences Communications

#### TEACHING AND SUPERVISION WORK

# MBA Teaching

- Teaching tutor (frontal classes, office hours, and grading) for Global MBA elective Advanced Strategy in a Stakeholder Economy. 2023 and 2024 cohorts. Teaching evaluation: 4.5/5
- Teaching tutor (frontal classes, office hours, and grading) for Global MBA elective Advanced Strategy, 2022 cohort. Teaching evaluation: 4/5

## Master's Teaching

• Teaching assistant (support and grading) for Master's module Sustainable Finance. 2024 cohort. Teaching evaluation: (pending)

#### MBA Theses

• Carlos Cadò, at Imperial College London, on a thesis regarding superior merger and acquisition performance of firms with high previous ESG performance.

# Master's Theses

- Noah Maurer, at Rotterdam School of Management (now PhD student at Imperial College London) on a thesis regarding organizational systems thinking's microfoundation in sustainability consulting companies.
- Edson Charikinya, at USB Stellenbosch on a thesis regarding sustainability activities in the mining sector.

## **High School Projects**

• I collaborated with the Lumiere Foundation (including pro bono work) to help students from disadvantaged backgrounds complete a research project that could spearhead them to higher education.

## Languages & Certifications

• Italian: native speaker

• French: basic (B1 course in UCLouvain, 16/20)

• English: fluent (Ielts 7.5, C1, January 2019)

• German: basic (Bocconi University B1 exam 29/30)