PhD Admission – Teaching Assistantship through Project (TAP) Position – Autumn 2026

Shailesh J. Mehta School of Management, IIT Bombay

Project Title: Applications of Technology and Innovation Management
Principal Investigator: Prof. Sawan Rathi, SJMSOM, IIT Bombay
Source of Funding: IRCC, IIT Bombay

Project description

This project explores how organizations or individuals can effectively manage technology and innovation to achieve sustainable competitive advantage, enhance societal impact, and foster inclusive growth. It focuses on understanding the mechanisms through which emerging technologies—such as artificial intelligence, digital platforms, biotechnology, and green technologies—transform industries, organizational structures, and innovation processes.

The research will combine theoretical and empirical inquiry to analyze how firms, sectors, and economies adapt to technological disruptions, manage R&D and innovation portfolios, and co-create value with stakeholders. Potential application areas include healthcare, manufacturing, digital services, sustainability transitions, and policy frameworks for innovation-driven growth.

Project aims
1. Examine key drivers and barriers influencing technology adoption and innovation diffusion across industries.
2. Develop **c**onceptual and empirical models to explain how firms manage technological change, innovation ecosystems, and digital transformation.
3. Assess the impact of technology and innovation management practices on organizational performance, societal outcomes, and sustainability.
4. Generate actionable insights for managers, policymakers, and entrepreneurs to foster innovation capability and strategic renewal.
5. Contribute to theory-building in areas such as open innovation, digital transformation, and innovation governance.

Candidate capabilities
The candidate must fulfil the PhD eligibility criteria of SJMSOM and IIT Bombay. In addition, an ideal candidate should possess the following skills:

1. A strong academic background in management, economics, engineering, or related disciplines.
2. Interest in research on innovation, digital transformation, and technology strategy.
3. Quantitative and/or qualitative research skills, such as econometrics, case study analysis, survey design, or text/data analytics.
4. Ability to work independently and collaboratively in an interdisciplinary environment.
5. Strong written and analytical communication skills**.**
6. Familiarity with research tools (e.g., Stata, R, or Python) will be an advantage

The candidate will have to go through the regular PhD admission process at SJMSOM, IIT Bombay.

Project title: Greenwashing in India's Corporate and Financial Ecosystem: Measurement and Detection

Principal Investigator (PI): Prof. Ved Dilip Beloskar, Accounting & Finance area, SJMSOM, IIT Bombay

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Student Stipend Funding: IRCC, IIT Bombay

Project description:

Environmental, Social, and Governance (ESG) performance is gaining global prominence as stakeholders demand greater sustainability and accountability in business practices. While ESG reporting has increased significantly, concerns persist regarding the credibility and verifiability of corporate sustainability claims. Greenwashing, the practice of firms overstating or misrepresenting their sustainability performance, is a significant concern in India, with studies showing that a majority of corporate environmental claims are misleading, most consumers have encountered such practices and express low trust, and nearly half of large listed firms exhibit evidence of greenwashing. This project addresses this greenwashing challenge in India's corporate sector, particularly amid expanding regulatory disclosures under SEBI's Business Responsibility and Sustainability Reporting (BRSR) framework.

The project aims to develop a novel, India-focused framework for identifying ESG greenwashing using publicly available corporate disclosures and regulatory filings. It adopts an interdisciplinary approach integrating finance, accounting, sustainability, and data-driven methods to analyse both qualitative narratives and quantitative indicators of firm behaviour. The project will examine inconsistencies and patterns in corporate ESG reporting, and investigate their economic drivers, market consequences, and the role of governance and regulatory mechanisms in shaping reporting credibility.

Project aims:

- Collect and **analyse detailed firm-level panel data** on **disclosure and performance of various ESG metrics**.
- Develop an India-focused **greenwashing measurement framework**.
- Construct a large-scale panel **dataset on greenwashing** for Indian listed firms.
- Examine the **determinants, consequences, and mitigants** of corporate greenwashing in India.

Candidate capabilities:

The candidate must fulfil the Ph.D. eligibility criteria of SJMSOM, IIT Bombay. Additionally, it is desirable that the candidate has the following academic interests and skills.

- Strong interest in **finance, accounting and ESG.**
- Understanding of **basic statistics and econometrics,** and working knowledge of **STATA/R/Python/SPSS** (or willingness to learn quickly)
- Interest in **data science, textual analysis, or NLP applications** (prior experience desirable but not mandatory)
- Ability to work with **structured and unstructured data sources**
- Strong **analytical thinking** and **academic writing skills**
- **Curiosity, patience, and the motivation to develop something new**
- Ability to **work independently** and in **interdisciplinary teams**

Why this project?:

- Addresses a **high-impact, policy-relevant problem** in India's evolving ESG landscape
- Offers an opportunity to work at the **intersection of finance and AI/ML**
- Builds a **unique research asset** with **long-term visibility**

What will the candidate gain?:

- Direct involvement in **cutting-edge and policy-relevant research** at the intersection of finance, ESG, and AI/ML
- Opportunity to **engage with industry stakeholders** (ESG and investment professionals, investors, regulators)
- Hands-on experience with **large-scale financial and textual datasets**, including BRSR, CMIE Prowess, Bloomberg, Refinitiv and other corporate disclosures
- Training in **advanced empirical methods** and **AI/ML applications in finance**, including text mining
- Strong preparation for **data-driven academic or industry roles in finance/ accounting**

Prospective applicants are encouraged to contact the PI via email to learn more about the project, expectations, and potential research fit.

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Shailesh J. Mehta School of Management, IIT Bombay

Project Title: Stochastic Inventory Portfolio Management Problem

Email: omkardpd@iitb.ac.in

Student Stipend Funding: IRCC, IIT Bombay

In voluntary blood donation systems, blood banks receive stochastic inflows of whole blood units from donors, from which up to 21 distinct components (e.g., packed red cells, platelets, plasma) can be extracted. Each component features unique attributes—including varying extraction costs, sales prices, quality verification standards, storage requirements, and shelf lives—while facing unpredictable, on-demand requests from hospitals and patients.

The core challenge is determining the optimal timing, quantity, and combination of components to extract and store from each incoming whole-blood unit, given random supply arrivals, stochastic demand patterns, and component perishability. Suboptimal decisions lead to resource waste: for instance, issuing unseparated whole blood (containing unnecessary components like Y and Z alongside the needed X) results in avoidable losses without benefiting the recipient, while over-extraction risks spoilage before use. In this environment, component pricing is equally critical to achieving an efficient balance between supply and demand, given recipient (or hospital) affordability and the blood bank's financial sustainability.

This constitutes a stochastic inventory portfolio management problem, in which the blood bank must dynamically decompose a single perishable input (whole blood) into a multi-asset output portfolio and component pricing to maximize service levels (meeting demand on time), minimize waste and costs, and ensure resource efficiency under uncertainty. Key decisions include extraction policies, storage allocation, issuance strategies, and pricing, balancing trade-offs in yield, holding costs, and shortage risks.

Competencies required:

1. Strong understanding and keen interest in optimization, including stochastic optimization and stochastic control.
2. Familiarity with techniques of analytical model building.
3. Familiarity with data analysis.

Project Instructors:

Prof. K. S. Mallikarjuna Rao (IEOR)

Prof. Omkar D. Palsule-Desai (SJMSOM)

PhD Admission: TAP Position 2026

Project Title: Consumer Decision making in Digital Environments

Principal Investigator: Prof. Srinwanti H. Chaudhury, SJMSOM, IIT Bombay

Source of Funding: IRCC, IIT Bombay

Project Description

Research project(s) will examine how consumers make decisions in digital environments, such as streaming platforms, metaverse ecosystems, or avatar-mediated interfaces. It will focus on understanding how digital choice architectures and immersive features (such as personalization and avatars) influence downstream consumer outcomes, including decision choices and behaviours.

Research will further identify the behavioural mechanisms underlying these effects, including reliance on recommendations and identity expression in digital contexts. A cross-cultural component can compare how consumers from developed (United States) and emerging (India) markets behave in order to assess how cultural orientations shape interaction with digital systems. As such, the project aims to advance theory and understanding of consumer decision-making, while generating actionable insights for digital platform design and policy.

Project aims

1. Examine consumer choice in digital environments, and uncover behavioural mechanisms that drive consumer interaction and decision-making.
2. Identify causal effects of digital choice architectures and features (e.g., personalization, interface design, avatars, and metaverse environments) on consumer outcomes such as choice, engagement, and decisions.
3. Examine cross-cultural variation in digital interaction, comparing developed and emerging markets (e.g., United States and India) to test generalizability and provide actionable insights to marketers, policymakers, and consumers.

Candidate Capabilities

The candidate should fulfil the PhD eligibility criteria of IIT Bombay and the School of Management. In addition, the ideal candidate should possess the following skills:

1. An academic background in computer science engineering, marketing, psychology, economics, or related disciplines.
2. Interest in research on digital consumption, human-computer interaction or algorithmically mediated environments.
3. Proficiency in web scraping and digital data collection using tools (e.g., Python APIs), along with an understanding of data ethics and platform policies.
4. Strong computational and analytical skills, including experience with statistical software (e.g., R or Python).
5. Ability to work independently and collaboratively, with strong written and analytical communication skills.