Abhishek Pramanick
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Referee: Dr. Barry Quinn

To,

The Organizing Committee,
NBER Innovation Research Boot Camp 2025

Subject: Application for the NBER Innovation Research Boot Camp 2025

With this letter, I submit my application for the NBER Innovation Research Boot Camp 2025 and express my interest in gaining insights into the crucial areas related to the economics of innovation. I am currently pursuing my PhD in Finance at the Queen's University Belfast with a PhD studentship from the Department for the Economy (DfE), Northern Ireland. The project focuses on the use of AI in the financial regulation space. I am also employed as a Research Assistant for an EPSRC (Engineering & Physical Sciences Research Council) funded feasibility study aimed at leveraging AI to enhance regulatory compliance in the Investment management industry working alongside a Regtech company towards a solution for making the complex space of compliance and supervision simpler for firms as well as regulatory authorities.

The first part of my PhD project comprises a comprehensive overview of the Regtech sector's evolution and its maturity. This work involves constructing detailed datasets of private companies and using survival analysis to identify drivers for consolidation driven by acquisitions. Further, the second part involves exploring the recent advancements in GenAI in the form of LLMs for faster and more efficient solutions to the complex problems of our time. My research aims at making these benefits accessible to all forms of stakeholders in the financial markets, both on the supervisory as well as the industry side to make it an equitable playing field. Regulations have always been seen as an additional cost to operation and the involvement of disruptive technologies makes it a difficult catch-up process for the regulators, therefore, leading to either risky markets for end users or exponential compliance costs for firms. Further challenges involve multiple versions of regulations which may generate inconsistencies. Apart from developing a technological solution, the feasibility project, which is also part of my PhD also involves evaluation of its relevant economic aspects for future technology investment decisions by firms as well as regulatory bodies.

I would also like to highlight my pre-doctoral work experience at Suzuki for more than 2 years, where I worked towards driving the acceptance of a customer-facing FinTech product across two Indian states with one of the lowest per capita GDP. During this stint, I realized that while it helped in democratizing finance by offering choices with complete transparency, the discussions around its acceptance had to contain benefits in terms of changes in the regional market dynamics for the city-specific car dealers and local financier offices. This made me realize the importance of bringing a structured approach to determine the success of any innovative solution.

The rich field of economics of innovation allows us to explore the diverse range of concepts that will allow me to ensure a solution with robust economic feasibility as well apart from its technical capabilities. With a vast array of experts from multiple research directions, this bootcamp provides a unique opportunity to learn and align my research for designing meaningful economic benchmarks and deriving important policy perspectives. Further, my research project allows me to apply these learnings in a practical landscape and realize a significant impact.

Thank you for considering my application. I look forward to the opportunity to participate in this unique bootcamp and be a part of a prestigious cohort working in an exciting field.

Yours Sincerely,
Abhishek Pramanick

ABHISHEK PRAMANICK

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WORK HISTORY

Research Experience,
Queen's University Belfast

- Academic Research in Fintech and Financial Regulation
- Teaching Assistant for Financial Econometrics module for BSc Finance students
- Research Assistant for UKFin+ Feasibility Project "Leveraging Artificial Intelligence to Enhance and Understand Regulatory Compliance in the Investment Management Industry"
- Coursework: Coursework is not required, yearly progress reviews completed suitably for first 2 years of PhD duration

Assistant Manager, **Arena Channel** 02/2020 - 06/2022
Maruti Suzuki* (*Suzuki India)

Optimization of multiple dealer partner businesses, handling a volume of ~4200 vehicles annually and generating revenue of about $30mn, spread across urban and semi-urban locations to ensure profitability, year-on-year growth, and maintain market share

- Target definition- Study of historical demand cycles to define targets achieving y-o-y growth of 30%
- Dealership KPIs - Improved the major KPIs leading to 2 dealer partners achieving the top performance bands
- Inventory optimization- Provide insights to dealers for optimization of inventory mix to maximize profitability and achievement of annual targets
- Territory analysis- Identification of drivers behind vehicle demand using historical data and market feedback
- Quotation management - Driving end-to-end quotation process for BTL marketing activities

Digital products & initiatives - Single Point of Contact for leading adoption of India's first Online End-to-End Car Finance Platform for two Indian states - Jharkhand & Bihar

- Interacting with banks and NBFCs to standardize loan processing at the regional level as per the online platform API
- Achieved 93% outlet level coverage and average month-on-month online case growth of 120%
- Implementing financier-wise tracking mechanism to ensure faster turnaround time for the online cases

Senior Business Development Analyst, **AI & Analytics** 04/2019 - 01/2020
Cognizant India

Sales enablement- Preparation of detailed narratives and POVs for proprietary Customer & Operations Intelligence AI offerings across industry verticals for sales enablement

- Describe the product approach, components, benefits and a complete walkthrough of a product interface
- Creation of relevant use cases as per the client's problem statement taking into consideration solution capabilities
- Product Marketing- Preparation of Marketing collaterals such as digital brochures related to various AI offerings (6+ offerings) to drive awareness among the sales leadership and the broader audience

Sales and Marketing Intern, 04/2018 - 06/2018
Maruti Suzuki (Suzuki India) – Motorsport

- Market analysis- Study of the prevailing scenario of motorsports in India
- Analysis of the various aspects of sponsors' association with motorsport, relative importance given to the various channels of promotions, and evaluation metrics
- Development of an implementation roadmap for the future strategy of the brand
- Suggested four probable activities by brand for increased initial engagement
- Developed potential insights for usage in development of future offerings
- Suggested six methods of promotion for successful sponsorship activation
- Performance and conduct assessed as Excellent after final evaluation

EDUCATION

PhD Candidate 10/2022 - Present
Queen's Business School, Queen's University Belfast

- Research area – FinTech and Regulatory Technology in Finance
- Fully-funded PhD Studentship from Department for the Economy, Northern Ireland
- Supervisors - Dr. Barry Quinn and Dr. Jesus Martinez del Rincon
- Working Paper -B Quinn, A Pramanick. "Regulatory Technology: A Quantitative Review in Financial Technology and In-depth Analysis of Regulatory Technology's Presence and Promise in FinTech"
- Working paper accepted at the Economics of Fintech Conference organised by the Edinburgh Business School (2023)
- Expert Comment - B Quinn, F Kearney, A Pramanick. "AI and the future of financial regulation" in the Economics Observatory
- Secured a fully funded place in ESRC Digital Good Network Summer School 2024
- Selected as a PhD Tutor under the Scholars Programme from the Brilliant Club

Master of Business Administration (Class of 2019) 06/2017 - 03/2019
Indian Institute of Management, Ranchi (India)

- Summer internship in the Motorsport division at Maruti Suzuki (Suzuki India)
- Trimester abroad at EMLYON Business School, France - Pursued courses in Marketing & Artificial Intelligence domain and worked in multi-nationality project groups
- Secured 96.18 percentile in the Common Admission Test (CAT) for MBA admission
- Projects- Google Online Marketing Challenge (Awarded Google Ads Top Marketer) Digital Marketing Campaign for Australian Regenerative Medicine Institute using Google Ad Words (Budget- 100 AUD/ day)
- Corporate Competitions and Accomplishments-
  - Mahindra War Room Season11 - Electric vehicle strategy for the Indian market with a focus on battery swapping
  - Nestle 4Ps- Repositioning and digital marketing strategy for Nescafe Latte brand
  - RPG Blizzard 6.0 for 'Smart Energy for a Smart Country' - Business plan for revenue generation of INR 200 Crores
  - Operations case study competition, IIT Kharagpur - End-to-end supply chain design for a company named Cabwire
  - Finance Case study competition, IIT Kharagpur - Financial valuation and comparison of Ashok Leyland & Eicher Motors

Bachelor of Electrical Engineering (Class of 2017) 08/2013 - 05/2017
Veer Surendra Sai University of Technology, Burla (India)

- Academic Project- Study of reactive power compensation using STATCOM and its implementation in a wind farm
- Member of the University's Official Music Club

Languages: English (Fluent), German (A1 Level), Hindi (Fluent)

Research Overview

My research aims to understand the evolution of Regtech (Regulatory Technology), a subsector that has emerged from Fintech (Financial Technology) and comprises the use of technology for regulatory compliance. Given the intensified regulatory scrutiny following the 2008 financial crisis, traditional financial institutions have recognized the value of efficiency improvements achieved through streamlined regulatory and compliance processes. The first part of my research project aims at exploring major fundraising trends for this new industry alongside Fintech. Further, it also aims to assess the industry maturity by studying drivers for M&A exits. Preliminary results indicate that Regtech firms mostly are acquired by companies involved in Financial Software and Consulting. We then conduct a survival analysis of these firms based on their financial and demographic attributes and involving various hierarchies based on technological advancement and geographies to gain insight into the early drivers of consolidation in this emerging industry.

The second part of my research project will further address the economics of regulation and look at the potential of Large Language Models (LLMs) towards ensuring a comprehensive regulatory approach and balancing the cost of regulations, especially for smaller financial firms. This involves an EPSRC (Engineering & Physical Sciences Research Council) funded grant for a feasibility study in association with an industry partner involved in the financial regulations services in the Investment Management space. Apart from my PhD studentship, I am also employed as a Research Assistant in this project. The project objective in the first phase involves designing a system that can use AI techniques for converting complex regulatory documents into simpler, consistent rules. For the second phase, we aim to determine the relevant economic principles in assessing the factors important for the sustained viability of this system and its acceptance in a real-world environment. As (Bryan & Williams, 2021) discuss, the landscape of competitive spirit of innovations sees the fixed costs being borne by the first movers. However, the consideration of higher social returns even in the wake of aggressive corporate tactics drives the motivation for studying more about the economic evaluations of our feasibility study which is expected to have a similar trajectory with the added advantage of initial costs inferred by a governmental organization for the welfare of the market participants. Also, the presence of appropriate complementary assets (Azoulay, et al., 2024) in the form of structured rules data from our industry partner makes it a perfect context for ensuring required standards for deployment. Further, the thinking paths can involve the concept of margins along the automation of tasks and improved productivity of capital (Jones & Liu, 2024). In a regulatory automation solution, these concepts are expected to be evaluated around metrics such as scalability at the firm level, adaptability across scenarios, and capability of avoiding punitive actions. Also, the models of automation and growth (Aghion, et al., 2017) will help in creating quantifiable references for suitable policy interventions with clearer pictures of expected growth rates in the regulatory services sector. (Jones, 2024)'s research in the existential risk space along the AI landscape further motivates thinking along the lines of considering companies as individuals and their respective sustenance upon technological advancements.

Therefore, the NBER boot camp is a perfect opportunity for me to engage with the crucial principles of the economics of innovation and derive meaningful insights from the experts in this field. This would allow me to conduct my research in an impactful manner and contribute to the field of innovation policy with a unique blend of key academic concepts in a practical setting.

References

Aghion, P., Jones, B. F. & Jones, C. I., 2017. Artificial Intelligence and Economic Growth. *NBER Working Paper Series.*

Azoulay, P., Krieger, J. L. & Nagaraj, A., 2024. Old Moats for New Models: Openness, Control, and Competition in Generative AI. *NBER Working Paper Series.*

Bryan, K. A. & Williams, H. L., 2021. Innovation: market failures and public policies. In: *Handbook of Industrial Organization.* s.l.:s.n., pp. 281-388.

Jones, B. F. & Liu, X., 2024. A Framework for Economic Growth with Capital-Embodied Technical Change. *American Economic Review,* 114(5), p. 1448–87.

Jones, C. I., 2024. The A.I. Dilemma: Growth versus Existential Risk. *American Economic Review: Insights,* 6(4), p. 575–90.

To Whom It May Concern,

I am pleased to recommend Mr Abhishek Pramanick for the NBER Innovation Research Boot Camp 2025. His PhD research focuses on how technology—especially AI—can transform regulatory compliance within financial institutions. It comprises three parts:

1. **Academic Review:** A critical survey of the existing literature on how technology and AI are reshaping financial regulation.

2. **Industry Analysis:** A comprehensive examination of the RegTech sector, applying firm-level data and survival analysis to understand growth and consolidation trends.

3. **Industry Placement:** A year-long project (funded by UKRI) with a local fintech firm, exploring AI-driven solutions for compliance in the European investment management industry. This involves close collaboration with our Computer Science department to develop an AI architecture that combines knowledge engineering, ontological learning, and retrieval augmented generation (a large language model approach).

Abhishek's research, grounded in advanced econometric methods and innovation economics, promises both academic and real-world impact. As his PhD supervisor and Principal Investigator on our EPSRC-funded project, I have been consistently impressed by his innovative thinking and commitment. Attendance at the Boot Camp would help refine the economic objectives of his work and foster valuable connections with experts in innovation economics—benefitting academia, policymakers, and the industry alike.

Thank you for your consideration. Please feel free to contact me for any further information.

Yours faithfully,

Dr Barry Quinn CStat AdvDSP



(Incoming Professor of Finance and Financial Technology, Ulster University Business School, June 2025)
Email: b.quinn@qub.ac.uk