Dear Kevin Bryan, Ina Ganguli, and Kyle Myers,

My name is Razan Amine and I am applying for the NBER Innovation Research Boot Camp 2024, as it is relevant to my main PhD project. I am currently in my second year of my PhD in Economics at the University of Cambridge, UK. My PhD is supervised by Prof. Tiago Cavalcanti (tvdvc2@cam.ac.uk), who is also the letter writer of this application. My advisor is Vasco Carvalho and he is also happy to be contacted in case you have any questions about me.

In the provided research essay, I outline my focus on examining the funding aspects of innovation for small and medium-sized enterprises (SMEs) in my first and main PhD project. I posit that participating in this boot camp serves multiple beneficial purposes. Firstly, it presents an exceptional chance for me to broaden my comprehension of the economics of innovation. Since my research aims to enhance our understanding of the challenges faced by innovative SMEs, I am excited to undertake a formal course in this domain. Secondly, the boot camp provides an opportunity to establish connections with scholars who share similar research interests and to collaborate with them on potential research projects. Thirdly, participation in the Boot Camp is anticipated to amplify the impact and outreach of my research, where I aspire to contribute insightful comments to the discussions and training sessions.

To sum up, my strong enthusiasm for advancing research in the economics of firms' innovation and innovation policies aligns with the primary goals of the NBER Innovation Research Boot Camp. More specifically, my dedication to exploring the financing aspects of innovative enterprises makes this boot camp a unique chance for me to enhance my knowledge in this area through coursework and active participation in the innovation research community.

Thank you in advance for your consideration of my application to this program.

Sincerely yours,
Razan Amine
ra612@cam.ac.uk
+44 (0) 7502478128

# RAZAN AMINE

razan.amine1@gmail.com

## EDUCATION

**Oct. '22- Ongoing** **University of Cambridge** **Cambridge, United Kingdom**

- **PhD** in **Economics.**
- **Full Scholarship Awardee** of the **Cambridge Trust Scholarship**.
- Supervisor and Advisor: Professor Tiago Cavalcanti, Professor Vasco Carvalho.
- PhD courses:
  - PhD12 Topics in Applied Microeconomics
  - PhD 13 Topics in Applied Economics and Public Finance
  - PhD 20 Firms Sectors in the Macroeconomy
  - PhD 21 Computation Methods

**Feb. '22- Ongoing** **Massachusetts Institute of Technology** **Cambridge, Massachusetts**

- Pursuing the MicroMasters in Data, Economics, and Development Policy.
- 5 courses: Data Analysis for Social Scientists, Microeconomics, Designing and Running Randomized Evaluations, The Challenges of Global Poverty, Good Times for Hard Times.

**Sept. '20- Jun. '21** **University of Oxford** **Oxford, United Kingdom**

- **Master of Science** (MSc) in **Economics for Development.**
- **Full Scholarship Awardee** of the **Oxford Centre of Islamic Studies (OCIS) Award**, 2020-21.
- Graduated with an overall **Merit** and **Distinction** on Quantitative Economics and Macroeconomics.
- Thesis is about the impacts of cash transfers on migration and attrition in Uganda and utilizes machine learning to deal with attrition.

**Jul. '19- Jun. '20** **Johns Hopkins University** **Washington, DC**
**School of Advanced International Studies (SAIS)**

- **STEM** Master's Degree in **International Economics and Finance** (MIEF), Class of 2020.
- **Fulbright** Foreign Student Scholarship Grantee 2019-20 (**Full Scholarship).**
- Cumulative **GPA 3.91/4.0**, with **Distinction, top 10%** of the cohort, rank 3rd in a class of 48 graduates.
- Thesis, marked **98.35/100 (A)**, is about fiscal policy cyclicality in developing economies.

**Sept. '15- Jun. '18** **American University of Beirut** **Beirut, Lebanon**

- Bachelor of Economics, Class of 2018.
- Cumulative **GPA: 4.0/4.0**- Graduated with **High Distinction**; Placement on the **Dean's Honors List** (Since Fall 2015). Ranked 1st in Economics and 5th in the Faculty of Arts and Sciences with a last semester GPA: **95/100**.
- **Full scholarship** at AUB from the National Council for Scientific Research (CNRS); awarded after ranking the **Second in Lebanon** among 15,000 candidates in the Economics/Sociology section in the Lebanese Baccalaureate Terminal Official exams, attaining the highest score in the history of this section.

## RESEARCH EXPERIENCE

**Nov. '21- Ongoing** **Research Manager and Research Fellow, J-PAL (Full-time)** **New Delhi, India**
**The Abdul Latif Jameel Poverty Action Lab (J-PAL)**

- Co-authoring a project with Esther Duflo on a Randomized Control Trial (RCT) on early childhood education.
- Managing a series of RCT's projects, throughout their project cycle, on vaccination, education, and government compliance in South Asia. I lead projects including: education and behavioral economics like "Dream A Dream", firms sectors "Firms Relocation" and agriculture "PAD".
- Drafting proposals and establishing budgets.
- Hiring and supervising research associates.
- Profile on J-PAL SA webpage.

**Nov. '21- Ongoing** **Researcher, IOM (Part-time)** **Erbil, Iraq**
**International Organization for Migration (IOM), United Nations**

- Designing and implementing an Randomized Control Trial (RCT) to enhance investment readiness of firms in Iraq.
- Co-authoring a paper with Professor Simon Quinn and Prof. Muhammad Meki (Oxford University) on the causal impact of an investment training model intervention on firms' investment in Iraq.

**March. '22- July '22** **Researcher, Economic Research Forum (ERF)** **Egypt**

- Co-authored a paper with the former minister of economy in Lebanon on Lebanon's Multifaceted Economic Crisis of October 2019. Link to paper.
- Co-authored a paper on the Arab Uprisings and The Path to National Peace and Sustainable Development. Link to paper.

**Aug. '21- Sept '22** **Research Consultant, ICTD (Part-time)** **Brighton, United Kingdom**
**Institute of Development Studies (IDS)**
**International Center for Tax and Development (ICTD)**

- Co-authored a paper (within the DIGITAX unit) with Fabrizio Santoro about the causal impact of e-filing on compliance in Eswatini using unique data and utilizing a D-in-D approach and a propensity score matching approach, plus a causal random forest methodology.
- Link to paper.

**Aug. '21- Oct. '21** **Research Consultant, J-PAL (Full-time)** **Cambridge, Massachusetts**
**The Abdul Latif Jameel Poverty Action Lab (J-PAL)**
**Massachusetts Institute of Technology**

- Writing reports on literature reviews on RCTs in various domains and critiques.
- Presenting case studies on various topics covering a whole project life cycle at J-PAL: research compliance, research operations, financial management, budget construction, grant proposals, and arising issues in conducting RCTs at each stage of the project cycle.

**Jun. '21- Sept '22** **Research Assistant, University of Oxford** **Oxford, United Kingdom**
**Economics Department**

- Co-authoring a paper with Professor Simon Quinn on the causal impacts of cash transfers on migration in Jordan.
- Worked with Professor Tim Vlandas on impact of partisanship on people's compliance to government rules in the UK.

**May '20- Nov. '20** **Research Assistant, University of Oxford** **Oxford, United Kingdom**
**Economics Department and Department of International Development**

- Worked with Professor Doug Gollin, my supervisor in the MSc Economics for Development, also the co-author of my former supervisor Sam Asher from Johns Hopkins University, on a project "Canal Irrigation in India."
- Collected and cleaned data on canals in India (date built, location etc.)
- Wrote a comparative analysis report on the canal administration in India pre- and post-independence.
- Wrote a report on the extent and nature of randomization in canal building by the British in the colonization era.

**Mar. '20- Sept. '20** **Research Assistant, Johns Hopkins University** **Washington, DC**
**School of Advanced International Studies (SAIS)**
**Department of International Economics**

- Worked with Professor Carlos Vegh on tax policy conduction in the oil producing countries, full-time starting June 2020 until September 2020.
- Collected macroeconomics data related to oil country's taxation mechanisms for at least 40 oil economies.
- Assisted in constructing a conceptual framework on tax policy instruments in the oil producing countries.
- Published a book chapter on renewable energy in the MENA region. Link to book chapter.

**Nov. '19- Sept. '20** **Research Assistant, Johns Hopkins University** **Washington, DC**
**School of Advanced International Studies (SAIS)**
**Department of International Economics**

- Worked with Professor Sam Asher on intergenerational mobility in the world.

- Collected micro-data from surveys of each country that asked questions about both individual and parental education to analyze the intergenerational education.
- Summarized papers about education mobility.
- Cleaned large datasets using Excel and imported them into STATA to assemble, merge and analyze them.
- Visualized data using the software R.

**Sept '19- Jun. '20** **Research, International Finance and Economics Review (InFER) Washington, DC**
**Johns Hopkins University, School of Advanced International Studies (SAIS)**

- InFER is a magazine for the Master of International Economics and Finance (MIEF) degree at SAIS.
- Managed the research section of the magazine by selecting, editing potential publications, and publishing them in the magazine. Link to magazine.

**Sept '18- Jun. '19** **Research Assistant, American University of Beirut Beirut, Lebanon**
**Institute of Financial Economics (IFE) and Department of Economics**

- ➢ Worked full-time with Professor Samir Makdisi on the project "The Economic Agenda for the Post-Conflict Reconstruction in Syria, Yemen, Libya, and Iraq", analyzing macro and micro economic policies for balanced growth.
- I researched large datasets, cleaned datasets, imported datasets into STATA, assembled, merged and analyzed them.
- Research proposals: Assisted in selecting and editing research proposals.
- Literature review: Analyzed previous literature about the topic.
- ➢ Worked with Professor Nisreen Salti on "Income Inequality and Composition of Public Debt in Lebanon."
- The project is a collaboration between the American University of Beirut and Carnegie Middle East Center.
- Summarized the literature review on the topic.
- Collected, assembled, merged and analyzed data on income inequality and public debt in Lebanon.

**Sept '18- Oct '18** **Researcher in Experimental and Behavioral Economics Hamburg, Germany**
**Department of Economics, Hamburg University**

- Full scholarship by the German Academic Exchange Service (DAAD), the program is organized by the Institute of Law and Economics at the University of Hamburg in cooperation with the Department of Economics at the American University in Beirut providing the scholars with a hands-on introduction to the findings and methods of behavioral and experimental economics.
- Practiced statistical analysis and coding in STATA.

**Dec '17- Jun '18** **Research Assistant, American University of Beirut Beirut, Lebanon**
**Applied Economics and Development Research Group (AUB-AED)**

- ➢ Worked on the project "Cash Monitoring Evaluation Accountability and Learning Organizational Network" to strengthen effectiveness, efficiency, accountability and learning of World Food Programme (WFP)'s cash transfer programme in Lebanon.
- Created questionnaires using SurveyCTO and analyzed data using STATA.
- Extracted and analyzed data and statistics to select the targeted recipients for food, shelter, education, etc.

## CONFERENCE PRESENTATIONS

- Working Group in African Political Economy (WGAPE) Annual Meeting organized by the Center for Effective Global Action (UC Berkley) in Rwanda (June 2022)
- 78th Annual Congress of the International Institute of Public Finance (IIPF) in Austria (August 2022)
- 9th Annual MannheimTaxation Conference in Mannheim, Germany (September 2022)

## TEACHING EXPERIENCE

**Sept '18- Jun '19** **Teaching Assistant, American University of Beirut Beirut, Lebanon**
**Economics Department**

- **Economics 211**, Intermediate Microeconomic Theory.
- **Economics 227**, Intermediate Macroeconomics.
- **Economics 240,** Development Economics**.**

- **Economics 295F,** Seminar in Political Economy and Development.
- Taught material, solving and review sessions, graded assignments and exams, and prepared lecture slides for class sizes that range between 15 to 45 students.

**Jun '16 – Jun '19** **Tutor, Synkers: Tutoring Mobile Application** **Beirut, Lebanon**
- Tutored students from the American University of Beirut (AUB), and Lebanese Baccalaureate candidates, various subjects, mainly Economics and Mathematics, alongside my undergraduate degree at AUB.

## COMMITTEE AND ORGANIZATION MEMBERSHIPS

**Feb '21- Jun '21** **Lead Member, Sustainability Committee** **Oxford, United Kingdom**
**Regent's Park College**
- Focusing on making progress on sustainability goals in the University of Oxford's colleges like the goal of energy saving through the reduction in the carbon footprint in buildings, in turn by utilising a new cloud-based platform eco-sync, which allows room by room control of heating and will synchronise room bookings with heating control.
- Working on influencing the implementation of other goals like reduction in energy consumption by installing a voltage optimiser transformer on site.

**Nov '20- Jun '21** **Lead Member, Equality and Diversity Committee** **Oxford, United Kingdom**
**Regent's Park College**
- Organizing discussions and inviting speakers to discuss diversity topics like gender or ethnic equality.
- Working on having everyone's voice heard by featuring individual stories that entail diverse backgrounds.

**Aug '19- Dec '19** **Officer of Local Events, Lebanese Embassy in Washington DC**
- Worked with the Lebanese Embassy Youth Association and with the ambassador Gabriel Issa of Lebanon to the US to organize Lebanese cultural and educational events for the Lebanese and other communities in DC.

**Jan '19- Ongoing** **Member, Lebanese Economic Association** **Beirut, Lebanon**
- Working with Professor Mounir Rachid on a research paper about how to promote the Lebanese investment in the given context of prolonged economic recession.
- Organizing (virtual and in-person) seminars and inviting expert speakers to discuss various economic topics.

**Aug '18- Jun '19** **Project Director** **Beirut, Lebanon**
**Help Syria's Kids NGO based in New York**
- Started my own social initiative called "Building Mindsets", creating a tutoring program to improve literacy rates of (starting with) 60 underprivileged Syrian refugee children, by developing a comprehensive 8-months educational strategy.
- Selected 40 volunteering students from the American University of Beirut.
- Held workshops and training sessions for the volunteers.
- Implemented my campaign in Ketermaya camp, Lebanon.
- Link to project details.
- Facebook page of the initiative.

**Dec '17 – Dec '18** **Member, World Merit Lebanon** **Beirut, Lebanon**
Lead Advocate for Sustainable Development Goal #10 - Reduced Inequality
- Wrote articles about the current regional and international issues related to all types of inequality for our online SDG Magazine (Sustainable Development Goals Magazine) that is sent to our subscribers.
- Spread awareness through our social media channels by posting news, articles, info graphics, facts, and description about the Sustainable Development Goals.
- Gave awareness workshops at the American University of Beirut.

## INTERNATIONAL PROGRAMS AND CONFERENCES

**April '19** **Leadership Accelerator Workshop, Morocco** **Casablanca, Morocco**

- Participated in a conference by Georgetown University in Casablanca, Morocco that accelerates Student Leaders community engagement and leadership skills through mentorship, encouraging plenaries, skill building sessions, evaluative presentations, career development tips, and CSO and alumni networking.

**Nov '18** **MENA Youth Capacity Building Humanitarian Action (MYCHA)** **Doha, Qatar**
**Hamad Bin Khalifa University, Qatar**

- Full scholarship from Qatar Fund for Development for a one-week program of various certified workshops in developmental projects, human rights, and social work presented by international NGOs: UNHCR, UNICEF, OCHA, Red Crescent, Mercy Corps, HAD, CARE, INEE, among others.
- Presented my project about educating the Syrian refugee children to gain tips on expanding it and maximizing the positive impact in Ketermaya camp, Lebanon.

**Jun '18- Aug '18** **MEPI Leadership Program Scholarship** **United States**

- Took courses at Georgetown and Portland State University in Conflict Resolution, Leadership, Project Management, and Democracy.
- Had educational visits to National Democratic Institute (NDI), Washington University, NGO Janus Youth, NGO Mercy corps, and Coffee Creek Correctional Facility.
- Designed a developmental project for Lebanon, aiming at implementing a free educational program for Syrian refugee children who are not enrolled in schools, which was implemented at Ketermaya camp in Lebanon.

## ADDITIONAL SKILLS

- Statistical Softwares: **STATA, EViews, LaTeX, MATLAB, SurveyCTO, R, Excel.**
- **Bloomberg Market Concepts (BMC) certificate.**
- **Languages:** Arabic (native), English (excellent and fluent, native level), French (novice).

## EXTRACURRICULAR INTERESTS

- Sports: Member of the Rowing Club at Regent's Park College, Oxford and the Oxford University Hiking Club.
    - Hiking experience:
        - **Snowline/Laka Glacier** – Himachal Pradesh, India
        - **Gadsar Pass Peak**- The Great Lakes, Kashmir
        - **Ben Nevis**- Highest mountain in Scotland, UK and British Isles
        - **Snowdonia**- Highest mountain in Wales, UK
        - **West Highland Way-** 155 KM in 5 days only in Scotland
        - **Qurnat as Sawda'-** Highest mountain in Lebanon – overnight from 11 pm to 6 am
- Arts: Vocal member of the Zaki Nassif Choir at the American University of Beirut.

**Research Statement for NBER Innovation Research Boot Camp 2024**

My current research interest aims at bridging the gap between micro- and macro-economic development. Combining both tools is extremely important: macro relevant to maximize policy impact and the micro tools give us a set of tools to identify causality. I am interested in studying the macroeconomic effects or general equilibrium (GE) effects of innovative policy interventions related to firms and labor markets; by first analyzing their partial equilibrium (PE) effects (through Randomized Control Trials) and then their GE effects (through macroeconomic models). I aim to use micro data to calibrate macroeconomic models and structural estimation to map the model to the data.

My main project currently is titled **"The Short- and Long-term Impacts of a Big Financial Push and Blended Finance for SMEs in Iraq"** (alongside co-authors *Simon Quinn and Muhammad Meki)*. Despite constituting the majority of firms in Iraq and contributing to nearly 90% of private-sector employment, small and medium-sized enterprises (SMEs) remain underdeveloped. SMEs have the potential to act as catalysts for economic growth and development in Iraq and other post-war settings, aiding in recovery and generating resources to address socio-economic challenges associated with the return and reintegration of displaced populations. In collaboration with a United Nations (UN) agency, who have committed 26 million USD for the implementation of this project, we plan to conduct an RCT involving SMEs that employ five workers on average. Insights from our pilot RCT with 265 SMEs indicate that these firms face both knowledge and financial constraints when it comes to expansion. We work with an innovative sample of firms, selected by an investment committee visit that creates scores based on the businesses' innovation. We propose to conduct an RCT that involves two key components. First, we offer firms access to a large capital grant, averaging approximately USD $17,000, aimed at partially addressing their stated financing need. Secondly, we provide 'external finance training' to support these firms in securing the additional capital required to fully meet their 'financing gap'. Furthermore, we introduce a 'blended finance' component, combining the grant with a condition for firms to seek external financing. One of our main outcomes of study is the firms' "investment-readiness" which is a proxy for innovation. A spin-off of this project (solo authored) will be examining the general equilibrium (GE) effects of enhancing access to finance to innovative businesses in developing countries.

My second project is **"Finding Jobs for Syrian Refugees and Local Job-Seekers in Jordan: Evidence from a Matching Intervention"** (with *Stefano Caria, Maximilian Kasy, Alexander Teytelboym, and Simon Quinn).* It is an evaluation of an innovative matching algorithm that enhances employment opportunities for locals and refugees. In this intervention, we connect treated job-seekers to suitable vacancies in the manufacturing sector. We provided a matching intervention to prospective employer firms; in this study, we estimate the consequences of that intervention.

My third project is **"Improving Early Childhood Education"**, with *Esther Duflo and Harini Kannan,* where we evaluate an innovative program to enhance ECE for children in India. We partner with Pratham, J-PAL and the Harvard Laboratory for developmental studies to evaluate the effectiveness of Pratham's early childhood education program, a play-based curriculum that jointly supports mothers and pre-school and early grades classroom teachers. The program targets physical, cognitive, social-emotional, and language skills.

My projects evaluate innovative policies but the main one that relates to the workshop is the first one (and is also the project that will have multiple papers for future research). My research endeavors to enrich our comprehension of the challenges confronting innovative SMEs and drivers to enhance innovation and I would like to pursue a formal course in this. The boot camp also provides a platform to establish connections with scholars who share similar research interests, fostering potential collaborations on research projects and widening my perspectives on these issues.

NBER Innovation Research Boot Camp 2024

Cambridge, 1 February 2024.

**To Whom It May Concern:**

Dear Colleague:

I am writing this letter on behalf of Razan Amine's application for the NBER Innovation Research Boot Camp 2024. Razan Amine is a third-year PhD student in economics at the University of Cambridge, specialising in the intersection of macroeconomics and economic development, under my supervision.

Razan holds a bachelor's degree in economics from the American University at Beirut, an MA in International Economics from Johns Hopkins, and an MSc in Economics for Development from the University of Oxford. Her undergraduate academic performance was outstanding, and she ranked among the top students in her MA program in International Economics at Johns Hopkins University. Professor Doug Gollin from Oxford and Professor Carlos Vegh from Johns Hopkins University highly recommend her, so we admitted her to our PhD in economics. Professor Carlos Vegh, in his recommendation letter, stated that Razan Amine is among his top three students since he joined Johns Hopkins in 2013.

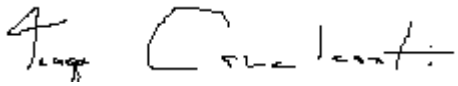
She is a promising PhD student with substantial research experience, having worked as a researcher at the J-Pal lab for an entire academic year prior to joining our PhD program. In her role at the J-Pal lab, she conducted Randomised Control Trials (RCTs) in developing countries, specifically in Jordan and Iraq. These RCTs aimed to design public policies that assist refugees in finding employment opportunities and help firms save resources. We have discussed these experiments in-depth, and she possesses a thorough understanding of them. Some of them have very interesting results and have the potential to be published in general economic journals.

Razan has made significant progress and has accumulated enough material such that she already has a PhD chapter and a paper that can be presented at various conferences. Looking ahead, she intends to bridge the findings from her experiments with established theories on firm dynamics and search and matching models of the labor market. I am confident that, with proper guidance, she will excel in our PhD program and produce valuable and innovative research.

**Trinity College University of Cambridge**
Austin Robinson Building, Sidgwick Ave, Cambridge CB2 1TQ England UK
https://www.trin.cam.ac.uk http://www.econ.cam.ac.uk/people/faculty/tvdvc2
tvdvc2@cam.ac.uk +447787558519

Given this impressive background, I strongly recommend Razan for your program. Please feel free to reach out if you require any additional information regarding her application.

Sincerely yours,



**Tiago Cavalcanti**
Professor in Economics and Fellow of Trinity College
University of Cambridge