Amirhossein Tavakoli

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Recommendation Letter Writer

Kevin Milligan, Professor of Economics in VSE at University of British Columbia
Email: Kevin.Milligan@ubc.ca

AMIRHOSSEIN TAVAKOLI

Ph.D. Candidate in Economics at the University of British Columbia

CONTACT INFORMATION

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EDUCATION

Ph.D. in Economics, University of British Columbia, Vancouver, Canada 2018 - present
Thesis: *Three Essays on Firms and Workers*

M.S. in Economics, GSME, Sharif University of Technology, Tehran, Iran 2016 - 2018
Thesis: Estimation of Gasoline Demand Elasticity in Iran
Advisers: Mohammad H. Rahmati; Mohammad Vesal

B.S. in Mechanical Engineering, Mechanical Engineering Department, Sharif University of Technology, Tehran, Iran 2011 - 2016
Thesis: Chaos Control in Two-Market Economic Model
Adviser: Aria Alasti

HONORS AND AWARDS

- PhD Candidacy in Economics 2021
- UBC Affiliated Fellowships – Doctoral competition 2020
- Ranked 6th in Entrance Examination for the M.S. Economics 2016
- Ranked 7th in the Nationwide University Entrance Examination for B.S. 2011
  Among More Than 400,000 Participants

RESEARCH AND PUBLICATION

- **What One Hundred Million Transactions Tell Us about Gasoline Elasticity of Demand** with M Vesal & M.H Rahmati, (**Empirical Economics 2022**) Link
- **Job Transitions and Employee Earnings After Acquisitions: Linking Corporate and Worker Outcomes** with D Arnold, K Milligan and T.S Moon Link

  Accepted at NBER Summer Institute 2023
- **Market Corporate Acquisitions and Investment: Evidence from Europe** with D Arnold, T.S Moon (Working Paper) Link
- **SR&ED Tax Credit, Firms Growth, and Worker Earnings (work in progress)**

RESEARCH INTEREST

- Innovation, Corporate Finance, Public Economics, Labor Economics, Industrial Organization

COMPLETED PH.D. COURSES

University of British Columbia *Vancouver, BC*

- Econ 600,601 (Microeconomics I and II)
- Econ 602, 603 (Macroeconomics I and II)
- Econ 626, 627, 628 (Econometrics I, II, and applied)
- Econ 515A, 515B (Special Topics in Microeconomics Theory)
- Econ 550 (Government Finance: Expenditure)
- Econ 551 (Government Finance: Revenue)
- Econ 565 (Market Structure and Business Behvaiour)
- Econ 566 (Business Performace and Public Policy)
- Econ 567 (Organization Theory and Non-market Allocation)

SKILLS

- STATA, MATLAB, C, C++, Julia, Python
- LATEX, Microsoft Word, Microsoft Excel, Microsoft PowerPoint.

Reasons to apply: This bootcamp is a valuable chance to learn from the experts in the innovation field. Attending the instructional days and the NBER Summer Institute Innovation Policy meeting are unique opportunities to understand the current and future research trends. Additionally, establishing connections with fellow researchers who share similar interests is crucial for fostering collaborative synergy to address challenging questions and contribute to the field's literature.

Research: In my current research, I study the impact of Scientific Research and Experimental Development (SRED, hereafter) tax incentive program in Canada on firms' growth, capital structure, innovation, and worker's labor market outcomes. This research is motivated by three reasons: First, due to the knowledge spillovers, the private returns of research and development (R&D) activities are generally below their social returns. Second, small to medium-sized enterprises (SMEs) often face greater financial constraints compared to larger firms which leads to underinvestment in early-stage R&D (Dechezlepretre et al. 2022, Howell 2017). Finally, a more nuanced and less studied, aspect of R&D tax credits is their impact on worker composition within firms. A more generous R&D tax credit encourages firms to hire more R&D-related employees. This, in turn, changes the firms' worker composition. Furthermore, at the employee level, innovators' effort within firms and their mobility across locations are also affected by the personal and capital tax system (Akcigit et al. 2022). Therefore, the research on government interventions such as R&D tax credits provides significant insights on how to encourage innovative activities at both the employer and the employee level.

In 2008, Canadian-Controlled Private Corporations (CCPCs) with prior-year taxable income below $700 thousand experienced a $1 million increase in their expenditure limit for a fully refundable 35 percent R&D tax credit. Exploiting this policy reform and a difference-in-difference design, I compare firms that experience an increase in their expenditure limit and their workers with control groups where they did not experience any change in their expenditure limit before and after the policy change. This study will use an administrative employer-employee data (CEED[1]) merged with two datasets of patent ownership from USPTO (United States Patent and Trademark Office) and from CIPO (Canadian Intellectual Property Office). My overall goal is to assess whether R&D tax credits assist SMEs to grow faster, innovate more, and whether their workers experience an increase in their earnings and job retention and if so, what potential channel contributes to these outcomes.

Moreover, using the patent ownership data, I test how R&D tax credits affect firms' participation in the technology market. On one hand, lower R&D user cost increases R&D expenditures, which may lead to more patents; hence, firms, especially smaller ones, are expected to increase in their patent transfer to other firms (Figueroa and Serrano 2019). On the other hand, firms may require complementary assets and intellectual properties (IP) to benefit from successful innovations, so they purchase more patents from other firms (Arora et al 2022a). Therefore, the impact of R&D tax credits on firms' participation in the technology market is an empirical question.

My broader research agenda explores business dynamism and innovation. For instance, I'm interested in understanding the impact of political connections on corporate outcomes such as survival and growth, and

[1] Canadian Employer Employee Dynamics Database (CEEDD): Introduction (statcan.gc.ca)

innovative output. Moreover, I'm interested in studying the relationship between political beliefs and entrepreneur activities.

References

1. Akcigit U, Hanley D, Stantcheva S. "Optimal taxation and R&D policies." Econometrica. 2022 Mar;90(2):645-84.

2. Arora A, Cohen W, Lee H, Sebastian D. "Invention value, inventive capability, and the large firm advantage". Research Policy. 2023 Jan 1;52(1):104650.

3. Arora A, Fosfuri A, Roende T. "Caught in The Middle: The Bias Against Startup Innovation With Technical And Commercial Challenges". National Bureau of Economic Research; 2022 Jan 17.

4. Dechezleprêtre A, Einiö E, Martin R, Nguyen KT, Van Re. "Do Tax Incentives Increase Firm Innovation? An RD Design for R&D, Patents, and Spillovers". CEP Discussion Paper. 2022 Oct 4(1413).

5. Figueroa N, Serrano CJ. "Patent trading flows of small and large firms". Research Policy. 2019 Sep 1;48(7):1601-16.

6. Howell ST. "Financing innovation: Evidence from R&D grants". American economic review. 2017 Apr 1;107(4):1136-64

a place of mind
THE UNIVERSITY OF BRITISH COLUMBIA
Vancouver School of Economics

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Re: Amir Tavakoli

February 1, 2024

Dear colleague,

I am delighted to be writing in support of the application of **Amir Tavakoli** for the NBER's Innovation Research Boot Camp 2024. I am Amir's co-advisor for his PhD thesis here at UBC, and he's been working as an RA for me for two years. I strongly support his participation in the Boot Camp.

Amir has worked for me on a project (along with my colleague Prof. Terry Moon) that is looking at the impact of corporate concentration on firm outcomes using administrative business administrative data combined with mergers and acquisition data. Amir wrote code to clean and merge these large complex datasets, and he did so with great efficiency, creativity, and skill. His performance was so good that we invited him onto the project as a full coauthor. He has contributed significantly to that project as it has evolved over the last year.

For his thesis work, Amir has built on an interest in innovation policy sparked in part by his research assistance to Prof. Nancy Gallini on patents. He has combined what he learned about patent data with his knowledge of business administrative data to develop an exciting research proposal. He describes the proposal in his part of the application package, but I will briefly summarize. Amir is looking at the impact of firms holding, selling, or buying patents on their own innovative activity. The idea of a 'patent box' is an active debate in tax policy, and I know public finance economists are curious to see if providing tax incentives to hold patents are merely an exercise of tax-base displacement across countries or if they truly incent new innovative activities. Amir uses variation from British Columbia's 'International Business Activity' tax credit to look at the impact of buying, selling, and holding patents for businesses.

At this stage, Amir has gained access to the data and built a solid empirical strategy. He has also produced some promising initial results. I think this puts him at the perfect time in his studies to benefit from an opportunity like the Innovation Research Boot Camp. He can see how other cutting-edge researchers approach research questions in innovation and contribute what he's learned so far both in terms of methods and finding new angles on innovation research questions that will really contribute to knowledge.

In addition to his qualifications and ideas, Amir is an outgoing student who would really add to the dynamism of the Boot Camp environment.

To close, let me reiterate my strong support for Amir's participation in the Innovation Research Boot Camp. I really think he's the perfect candidate for this opportunity and I hope you'll have the chance to meet him.

Please do not hesitate to contact me if you have further questions about Amir.

Yours truly,



Kevin Milligan
Professor of Economics
UBC Vancouver School of Economics