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NBER Entrepreneurship Research Boot Camp 2020: Application Cover Letter

To whom it may concern,

I am a third-year PhD Student in economics at Princeton University. I would like to hereby apply to the NBER Entrepreneurship Research Boot Camp 2020. My recommendation letter writer will be Prof. Stephen Redding (reddings@princeton.edu).

Thank you for your time and consideration.

With best regards,

Binyamin Kleinman

Attached: Curriculum Vita, Application Essay

Binyamin Kleinman

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Education

2017-Present, Princeton, USA — Princeton University
Ph.D in Economics
- Advisor: Prof. Stephen Redding
- Primary fields: Macroeconomics, International Trade
- Secondary fields: Labor Economics, Economic Geography

2012-2015, Tel Aviv, Israel — Tel-Aviv University
M.A. in Economics - Summa Cum Laude

2008-2011, Haifa, Israel — University of Haifa
B.A. in Economics and Middle Eastern History - Summa Cum Laude
- Joint program with Israel Defense Ministry's "Havatzalot" program

Completed Ph.D Coursework

Core:
ECO 501 Microeconomic Theory I
ECO 502 Microeconomic Theory II
ECO 503 Macroeconomic Theory I
ECO 504 Macroeconomic Theory II
ECO 517 Econometric Theory I
ECO 518 Econometric Theory II

Non-core:
COS 424 Fundamentals of Machine Learning
ECO 507 Empirical Macroeconomics
ECO 521 Advanced Macroeconomic Theory I
ECO 522 Advanced Macroeconomic Theory II
ECO 541 Graduate Industrial Organization
ECO 551 International Trade I
ECO 552 International Trade II

Academic Professional Experience

2020 — Research Assistant, Princeton University: Prof. Stephen Redding

2019 — Research Assistant, Princeton University: Prof. Stephen Redding, Prof. Gianluca Violante, Prof. Benjamin Moll

2018 — Research Assistant, Princeton University: Prof. Gianluca Violante, Prof. Gregor Jarosch

Non-Academic Professional Experience

2015-2017 — Senior Economic Analyst (Major), Israel Ministry of Defense

2011-2015 — Analyst (Lieutenant, Captain), Israel Ministry of Defense

2008-2011	Cadet in "Havatzalot" Program, Israel Ministry of Defense - First Class Honors ▪ IDF Officer Training School - Graduated with Honors (2009)

Awards and Honors

2017-2018	The J. Edward Lundy *40 Fellowship for Economics, Princeton University
2014-2015	Tel Aviv University Academic Distinction Fellowship
2011	Haifa University Academic Distinction Fellowship

Programming Skills

Julia, Matlab, Stata, FORTRAN, Python

Language Skills

Hebrew (Native), English (Fluent), Russian (Fluent), Arabic (Basic)

NBER Entrepreneurship Research Boot Camp 2020

Application Essay - Binyamin Kleinman

March 15, 2020

Before starting my Ph.D. in economics, I worked as an analyst covering the economies of Middle-Eastern countries. Low rates of business creation was an issue repeatedly raised by both scholars and policymakers from the region, viewed as a key obstacle to growth and development. This experience was significant in shaping my research interests, leading me to focus on firm dynamics and growth in my studies. Being later exposed to recent macro-trends in the developed world - in particular the decline in business dynamism and the slowdown of productivity growth - has strengthened this direction, placing the study of entrepreneurship and its relation to macroeconomic phenomena in my research agenda. I find the NBER Entrepreneurship Research Boot Camp to be an incredible opportunity to develop related knowledge and skills, improving my research on these topics.

My current research direction concerns the effects of international trade on business dynamism and entrepreneurship in developed countries. Standard theories of trade and firm dynamics, following Melitz (2003), suggest that opening to trade should increase dynamism, as measured by job reallocation and startup rates. Indeed, trade liberalization is often prescribed as a policy measure that could promote competition, innovation and growth. However, despite a large increase in foreign trade and multinational production, recent decades are characterized by a decline in dynamism, as indicated by various measures[1]. In my project, I study whether this could be explained by trade-induced reallocation of production to "fixed-cost intensive" industries, e.g. those with high return to innovation. In this scenario, skilled labor is channeled into process-innovation by existing firms due to market size effects, raising the opportunity cost for entrepreneurship. A key distinction relative to the baseline trade model with firm heterogeneity is an assumption of imperfect substitution between the labor used for production, and the labor used for product and process innovation. This assump-

[1] See for example Decker et al. (2014).

tion relates to the fundamental questions of who are entrepreneurs, and what is the opportunity cost for setting up a business. To validate this assumption and my theory's predictions, I am currently in an advanced stage of applying to restricted U.S. Census data. Based on it, I plan to analyze the effect of foreign demand shocks on an industry's average firm size, startup rates, dynamism and composition of new firms.

In another project, joint with my classmate Juan Manuel Castro Vincenzi, we revisit the issue of financial constraints to young firms in developing countries. We are interested to test the idea that productive entrepreneurs can escape such constraints through self-financing and the build-up of equity, as suggested by many models, e.g. Moll (2014) and Midrigan and Xu (2014). Under this view, high marginal return to capital that is commonly measured in developing countries is not a result of financial constraints. To this end, we are cooperating with the Central Bank of Costa Rica, facilitating access to firms' balance sheet data that is suitable to study this question. We intend to estimate productivity shocks using production-function-estimation techniques, and deduce the importance of financial constraints from responses of firms to such shocks, conditional on their level of equity.

Finally, I am also interested in the spatial dimensions of entrepreneurship. A classic question in economic geography concerns the importance of agglomeration forces relative to fundamental characteristics of locations in shaping the heterogeneous distribution of activity across space. I find this question of particular importance in the context of rising information technology (IT) industries, as many authorities try to promote the creation of local entrepreneurship hubs through various place-based interventions. Moreover, despite the lesser role of some traditional agglomeration forces such as trade costs (to suppliers and to consumers), the geographic concentration of IT activity is particularly high. The two forces I plan to explore include labor-pooling and the importance of proximity to common financial sources, potentially as a solution to significant moral hazard frictions. This is also the impression I got in conversations with friends and colleagues that have started businesses in the industry. I believe that understanding the role of agglomeration forces in the IT industry would help to improve commonly implemented policies.

Taking into account my interests and research directions, I believe that the NBER Entrepreneurship Research Boot Camp would be a great opportunity for me to acquire new tools and get exposed to new questions. I expect to contribute other participants through my focus on how entrepreneurship interacts with trade and geography, as well as my emphasize on combining theory with empirical work. Above all, I am excited to learn from and collaborate with professors and students from around the world that are also interested in entrepreneurship and growth.

References

Decker, Ryan, John Haltiwanger, Ron Jarmin, and Javier Miranda, "The role of entrepreneurship in US job creation and economic dynamism," *Journal of Economic Perspectives*, 2014, *28* (3), 3–24.

Melitz, Marc J, "The impact of trade on intra-industry reallocations and aggregate industry productivity," *Econometrica*, 2003, *71* (6), 1695–1725.

Midrigan, Virgiliu and Daniel Yi Xu, "Finance and misallocation: Evidence from plant-level data," *American economic review*, 2014, *104* (2), 422–58.

Moll, Benjamin, "Productivity losses from financial frictions: Can self-financing undo capital misallocation?," *American Economic Review*, 2014, *104* (10), 3186–3221.

Stephen J. Redding
Director, NBER International Trade Program
Harold T. Shapiro*64 Professor in Economics
Department of Economics and Woodrow Wilson School
Princeton University

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15 March 2020

Dear colleague,

R.E. Confidential Recommendation Letter for Benny Kleinman

I am delighted to write this recommendation letter in support of Benny Kleinman's application for the NBER Entrepreneurship Bootcamp. Benny took my International Trade PhD class last year. He is currently in the third year of the PhD and I am the main advisor of his dissertation. Without a doubt, he is one of the strongest PhD students that I have encountered during my time at Princeton. In my view, he compares well with some of the most successful PhD students that Princeton has produced in recent years, such as Adrien Bilal (who received job market offers from Chicago econ and Harvard econ), Christian Wolf (who received job market offers from Chicago Booth and MIT econ), and Anders Humlum (who received job market offers from Chicago Booth and Penn econ).

Benny's third year paper "International Trade and Competition in the United States" provides new theory and evidence on the pro-competitive effects of international trade. From a theoretical perspective, the paper develops a multi-sector general equilibrium model of oligopolistic competition. The formalization of oligopolistic competition using constant elasticity of substitution (CES) preferences and a finite number of firms follows Atkeson and Burstein (2008)and Eaton, Kortum and Sotelo (2010). The main theoretical contribution is to introduce trade in intermediate inputs into these models of oligopolistic competition, allowing both the elasticity of substitution and trade costs to differ between final goods and intermediate input trade. As a result, reductions in trade costs affect consumer welfare through both increased final goods market competition and lower intermediate input costs, but these reductions in intermediate input costs need not be passed through fully to consumers, because of the variable markups introduced by oligopolistic competition.

From an empirical perspective, the paper applies this framework to examine the contributions of international trade and other forces to changes in firm markups, the concentration of firm sales and welfare in the United States from 1997 to 2012. The key parameters of the model are structurally estimated using the simulated method of moments (SMM). The estimated model is used to undertake counterfactuals to quantify the contribution of different forces in the model, including changes in trade costs for both final goods and intermediate inputs. The paper finds stronger pro-competitive effect of trade is greater in industries with high initial concentration and incomplete passthrough of reductions in input costs as a result of international trade into consumer prices. The theoretical modelling is elegant throughout and the econometric analysis is rigorous. The

paper provides a thorough treatment of the role of the different moments in identifying the model parameters. The quantitative model is shown to provide a good approximation to the data for both targeted and non-targeted moments. In my view, the paper provides a stellar example of frontier structural empirical research, and is already publishable.

More broadly, Benny's ongoing research falls squarely at the center of the implications of international trade for business dynamism and entrepreneurship. I think that he would benefit greatly greatly from attending the NBER Entrepreneurship Bootcamp and his outstanding research abilities would provide strong positive externalities to other participants in the Bootcamp. I cannot envisage a stronger candidate and recommend Benny in the strongest possible terms. Please don't hesitate to contact me for further information.

Yours Faithfully,

